

FORM PTO-1390 (Modified) (REV. 01-2003)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTORNEY'S DOCKET NUMBER <b>820701-1315</b>
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371		U.S. APPLICATION NO. (IF KNOWN) <b>10/579683</b>		
INTERNATIONAL APPLICATION NO. <b>PCT/US2004/038506</b>	INTERNATIONAL FILING DATE <b>17 November 2004</b>	PRIORITY DATE CLAIMED <b>17 November 2003</b>		
TITLE OF INVENTION <b>ENGINEERING ENZYMES THROUGH GENETIC SELECTION</b>				
APPLICANT(S) FOR DO/EO/US: <b>DOYLE, Donald F., SCHWIMMER, Lauren J., BAHAREH, Azizi</b>				
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:				
<ol style="list-style-type: none"> <li>1. <input checked="" type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a filing under 35 U.S.C. 371.</li> <li>2. <input type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a filing under 35 U.S.C. 371.</li> <li>3. <input checked="" type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.</li> <li>4. <input type="checkbox"/> The US has been elected (Article 31).</li> <li>5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2)).             <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input checked="" type="checkbox"/> has been communicated by the International Bureau</li> <li>c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</li> </ol> </li> <li>6. <input type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).             <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> is attached hereto.</li> <li>b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).</li> </ol> </li> <li>7. <input type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)).             <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input type="checkbox"/> have been communicated by the International Bureau.</li> <li>c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</li> <li>d. <input type="checkbox"/> have not been made and will not be made</li> </ol> </li> <li>8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).</li> <li>9. <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)). (<b>Unsigned</b>)</li> <li>10. <input type="checkbox"/> An English language translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).</li> </ol>				
Items 13 to 23 below concern document(s) or information included:				
<ol style="list-style-type: none"> <li>11. <input checked="" type="checkbox"/> An Information Disclosure Statement under 37 C.F.R. 1.97 and 1.98.</li> <li>12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.</li> <li>13. <input type="checkbox"/> A preliminary amendment</li> <li>14. <input type="checkbox"/> An Application Data Sheet under 37 CFR 1.76.</li> <li>15. <input checked="" type="checkbox"/> A substitute specification. (<b>containing new set of claims for examination</b>)</li> <li>16. <input type="checkbox"/> A power of attorney and/or change of address letter.</li> <li>17. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 35 U.S.C. 1.821-1.825.</li> <li>18. <input checked="" type="checkbox"/> A second copy of the published international application under 35 U.S.C. 1.54(d)(4).</li> <li>19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).</li> <li>20. <input checked="" type="checkbox"/> Other items or information: International Search Report mailed 6 September 2005; Written Opinion of the International Searching Authority mailed 6 September 2005; Copy of PCT Request Form PCT/RO/101 (4 pages); and Return Postcard</li> </ol>				

U.S. APPLICATION NO. <b>107570683</b>		INTERNATIONAL APPLICATION NO. PCT/US2004/038506	ATTORNEY'S DOCKET NO.: 820701-1315																																																																																																																											
<p>The following fees are submitted:</p> <table border="1"> <tr> <td rowspan="2">21. <input checked="" type="checkbox"/></td> <td rowspan="2">Basic national fee (37 CFR 1.492 (a))</td> <td rowspan="2">\$300</td> <td>CALCULATIONS</td> <td>PTO USE</td> </tr> <tr> <td>ONLY</td> <td></td> </tr> <tr> <td>22. <input checked="" type="checkbox"/></td> <td>Examination Fee (37 CFR 1.492(c)) If the written opinion prepared by ISA/US or the international preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4)</td> <td>\$0</td> <td>\$</td> <td></td> </tr> <tr> <td>23. <input checked="" type="checkbox"/></td> <td>All other situations</td> <td>\$200</td> <td>\$200</td> <td></td> </tr> <tr> <td colspan="2"></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2"></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2"></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="5" style="text-align: center;"><b>TOTAL OF 21, 22 and 23 =</b></td> </tr> <tr> <td colspan="5"> <input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing in compliance with 37 CFR 1.821© or (e) or computer program listing in an electronic medium) (37 CFR 1.492(j)). The fee is \$250 for each additional 50 sheets of paper or fraction thereof.         </td> </tr> <tr> <td>Total Sheets</td> <td>Extra Sheets</td> <td>Number of each additional 50 or fraction thereof (round up to a whole number)</td> <td colspan="2">RATE</td> </tr> <tr> <td>-100=</td> <td>/50=</td> <td></td> <td>x \$250</td> <td>\$</td> </tr> <tr> <td colspan="5">Surcharge of \$130.00 for furnishing any of the search fee, examination fee, or the oath or declaration after the date of commencement of the national stage (37 CFR 1.492(h)).</td> </tr> <tr> <td>CLAIMS</td> <td>NUMBER FILED</td> <td>NUMBER EXTRA</td> <td colspan="2">RATE</td> </tr> <tr> <td>Total claims</td> <td>20- 20 =</td> <td>0</td> <td>x \$50</td> <td>\$</td> </tr> <tr> <td>Independent claims</td> <td>4- 3 =</td> <td>1</td> <td>1 x \$200</td> <td>\$200</td> </tr> <tr> <td colspan="3">Multiple Dependent Claims (check if applicable).</td> <td>+ \$360</td> <td>\$</td> </tr> <tr> <td colspan="5" style="text-align: center;"><b>TOTAL OF ABOVE CALCULATIONS =</b></td> </tr> <tr> <td colspan="5"> <input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2.         </td> </tr> <tr> <td colspan="5" style="text-align: right;"><b>SUBTOTAL =</b></td> </tr> <tr> <td colspan="5">         Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(j)).       </td> </tr> <tr> <td colspan="5" style="text-align: right;"><b>TOTAL NATIONAL FEE =</b></td> </tr> <tr> <td colspan="5">         Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31) \$40.00 per property       </td> </tr> <tr> <td colspan="5" style="text-align: right;"><b>TOTAL FEES INCLOSED =</b></td> </tr> <tr> <td colspan="4" style="text-align: right;">Amount to be: refunded</td> <td>\$</td> </tr> <tr> <td colspan="4" style="text-align: right;">Amount to be charged</td> <td>\$</td> </tr> </table>					21. <input checked="" type="checkbox"/>	Basic national fee (37 CFR 1.492 (a))	\$300	CALCULATIONS	PTO USE	ONLY		22. <input checked="" type="checkbox"/>	Examination Fee (37 CFR 1.492(c)) If the written opinion prepared by ISA/US or the international preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4)	\$0	\$		23. <input checked="" type="checkbox"/>	All other situations	\$200	\$200																	<b>TOTAL OF 21, 22 and 23 =</b>					<input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing in compliance with 37 CFR 1.821© or (e) or computer program listing in an electronic medium) (37 CFR 1.492(j)). 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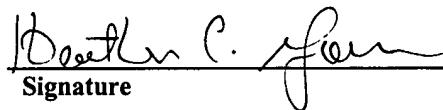
10/579683  
JAP20 Rec'd PCT/PTO 17 MAY 2006

- a.  A check in the amount of \_\_\_\_\_ to cover the above fees is enclose.
- b.  Please charge my Deposit Account No. 20-0778 in the amount of \$400.00 to cover the above fees.  
A duplicate copy of this sheet is enclosed.
- c.  The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 20-0778. A duplicate copy of this sheet is enclosed.
- d.  Fees are to be charged to a credit card. **WARNING:** Information on this form may become public. **Credit card information should not be included on this form.** Provide credit card information and authorization on PTO-2038.

**NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.**

SEND ALL CORRESPONDENCE TO:

**Heather C. Gorman  
Thomas, Kayden, Horstemeyer  
& RISLEY, L.L.P.  
100 Galleria Parkway, Suite 1750  
Atlanta, Georgia 30339**

  
Signature

**Heather C. Gorman**  
Name

**42,389**  
Registration Number

**5/17/05**  
Date

10/579683

PATENTS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: **DOYLE, Donald, et al.**

AP20RCC3PCT/PTO 17 MAY 2006

For: **ENGINEERING ENZYMES THROUGH GENETIC SELECTION**

**CERTIFICATE OF EXPRESS MAIL**

Mail Stop PCT (DO/EO/US)  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Enclosed for filing in the above case are the following documents:

Return Postcard  
Transmittal Letter to the US Designated Office  
(DO/EO/US) (3 Pages)  
Substitute Specification Consisting of:  
47 Pages of Specification  
3 Pages of Claims  
1 Page Abstract  
23 Pages Sequence Listing  
Sequence Listing Verification  
Statement Under 37 CFR 1.821(e)  
Declaration (Unexecuted)  
Information Disclosure Statement and PTO 1449  
Copy of International Search Report and Written Opinion  
Copy of Published International Application WO 2005/049804  
Deposit Account Authorization in the amount of \$400.00

Further, the Commissioner is authorized to charge Deposit Account No. 20-0778 for any additional fees required. The Commissioner is requested to credit any excess fee paid to Deposit Account No. 20-0778.

Respectfully submitted,

**Heather C. Gorman**



**THOMAS, KAYDEN, HORSTEMEYER  
& RISLEY, L.L.P.**  
100 Galleria Parkway, N.W.  
Suite 1750  
Atlanta, Georgia 30339-5948

Our Docket No: **820701-1315**

I hereby certify that all correspondences listed above are being deposited for delivery to the above addressee, with the United States Postal Service "EXPRESS MAIL POST OFFICE TO ADDRESSEE" service under 37 CFR §1.10 on the date indicated below:

The envelope has been given U.S. Postal Service "Express Mail Post Office To Addressee" Package # EV861588012US.

Date: 5/17/2006

Signature Laurie Delesandro  
Laurie Delesandro